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60/270,216 20 February 2001 (20.02.2001) US(71) Applicant (for all designated States except US): CORIXA  
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tle, WA 98104-7092 et al. (US).(81) Designated States (national): AE, AG, AL, AM, AT, AU,  
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IIFor two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

WO 01/096388 A3

(54) Title: COMPOSITIONS AND METHODS FOR THE THERAPY AND DIAGNOSIS OF COLON CANCER

(57) Abstract: Compositions and methods for the therapy and diagnosis of cancer, such as colon cancer, are disclosed. Composi-  
tions may comprise one or more colon tumor proteins, immunogenic portions thereof, or polynucleotides that encode such portions.  
Alternatively, a therapeutic composition may comprise an antigen presenting cell that expresses a colon tumor protein, or a T cell  
that is specific for cells expressing such a protein. Such compositions may be used, for example, for the prevention and treatment of  
diseases such as colon cancer. Diagnostic methods based on detecting a colon tumor protein, or mRNA encoding such a protein, in  
a sample are also provided.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/18557

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K14/47 C07K14/82 C12N15/12 C12N15/62

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, EMBL, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SIMON B ET AL: "EPITHELIAL GLYCOPROTEIN IS A MEMBER OF A FAMILY OF EPITHELIAL CELL SURFACE ANTIGENS HOMOLOGOUS TO NIDOGEN, A MATRIX ADHESION PROTEIN" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 87, no. 7, 1 April 1990 (1990-04-01), pages 2755-2759, XP000651084 ISSN: 0027-8424 figure 3  --- -/--	1-9, 11-17



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*G\* document member of the same patent family

Date of the actual completion of the international search

7 January 2002

Date of mailing of the international search report

13.05.02

Name and mailing address of the ISA

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/18557

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PEREZ M S ET AL: "ISOLATION AND CHARACTERIZATION OF A CDNA ENCODING THE KS1/4 EPITHELIAL CARCINOMA MARKER" JOURNAL OF IMMUNOLOGY, THE WILLIAMS AND WILKINS CO. BALTIMORE, US, vol. 142, no. 10, 15 May 1989 (1989-05-15), pages 3662-3667, XP000651096 ISSN: 0022-1767 figure 2 ----	1-9, 11-17
X	EP 0 326 423 A (LILLY CO ELI) 2 August 1989 (1989-08-02) page 9 page 16, line 27 -page 17, line 18 ----	1-9, 11-17
X	SZALA S ET AL: "MOLECULAR CLONING OF CDNA FOR THE CARCINOMA-ASSOCIATED ANTIGEN GA 733-2" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 87, no. 9, 1 May 1990 (1990-05-01), pages 3542-3546, XP000566331 ISSN: 0027-8424 see the whole document -----	1-9, 11-17

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 01/18557

## Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
  
Although claims 9, 12, 13 and 17 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☒ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
  
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:  
  
1-9, 11-17 (all partially)

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-9, 11-17 (all partially)

The claims insofar as they relate to SEQ ID NO: 1

2. Claims: 1-9, 11-17 (all partially)

Inventions 2 to 2235; Claims insofar as they relate to SEQ ID NO:s 2 to 2235

3. Claims: 10 and 11-13 (partially)

Invention 2236: A T-cell population and the use thereof

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

## Continuation of Box I.2

Items (d) to (g) of Claim 1 are directed to a multitude of undefined nucleotide fragments which are neither defined by their function nor by their length. Thus, the scope of Claim 1 in this respect (and consequently the scope of all other claims relating to these items) is totally unclear and unlimited and renders a meaningful or complete research impossible.

The same applies for the oligonucleotides according to Claim 8 (and consequently the method and the diagnostic kit according to Claims 14 and 15).

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/18557

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0326423	A	02-08-1989	CA 1340221 A1	15-12-1998
			DE 68922757 D1	29-06-1995
			DE 68922757 T2	16-11-1995
			DK 35189 A	31-07-1989
			EP 0326423 A2	02-08-1989
			JP 2005867 A	10-01-1990
			JP 2774298 B2	09-07-1998
			US 5348887 A	20-09-1994
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